

Amendments to the Drawings:

The attached 7 replacement sheets include changes to Figs. 1, 5A, and 5C. These sheets replace the original sheets including Figs. 1, 2, 3, 4, 5A-C and 6.

In the replacement sheets, Ref. No. 106 has been removed from Fig. 1, Ref. Nos. 565, 527, 535, 550, and 517 have been removed from Fig. 5A, and Ref. Nos. 529, 597, and 517 have been removed from Fig. 5C. The attached 3 annotated sheets are provided showing the changes.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

Claims 1-28 were pending in this application. Claims 14 and 24 have been amended. No claims have been added or canceled. Hence, claims 1-28 remain pending. Reconsideration of the subject application as amended is respectfully requested.

Claims 1, 8-11, 13-14, 19-22 and 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the cited portions of U.S. Patent No. 6,218,268 to Xia, *et al.* (hereinafter "Xia").

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Xia.

Claims 2, 3, 6 and 7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Xia, in view of the cited portions of U.S. Patent No. 6,013,584 to M'Saad, *et al.* (hereinafter "M'Saad").

Claims 4, 12 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Xia, in view of the cited portions of U.S. Patent Publication No. 2002/0050605 to Jeng, *et al.* (hereinafter "Jeng").

Claims 15-18 and 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Xia, in view of the cited portions of U.S. Patent No. 6,500,771 to Vassilev, *et al.* (hereinafter "Vassilev").

Claims 14 and 24 have been amended to change TEPO to TEPO as required by the office action. No new matter has been added.

The specification has been amended to change TEPO to TEPO in several places. The specification also has been amended to include support for claim 4, the support for which may be found at claim 4 of the original application. No new matter has been added. The drawings have been amended as discussed above. The Abstract has been shortened. The Applicants believe the amendments herein address all the office action's objections to the drawings, claims and specification.

The Applicants have included an IDS herewith that addresses any shortcomings of the prior IDS.

The Applicants acknowledge the office action's comment about the priority claim of the present application. Without acquiescing to the propriety of the comment, the Applicants state that the present application claims priority to U.S. Patent Application No. 10/247,672 to the extent that application discloses the claimed subject matter of the present application.

Claim Rejections Under 35 U.S.C. § 102(b)

The Applicants respectfully traverse the rejections of all claims rejected under 35 U.S.C. § 102(b), since the cited references do not teach all the claim elements as required for a proper rejection under 35 U.S.C. § 102. Specifically, claim 1 recites, in part, "wherein depositing the conformal layer comprises varying over time a ratio of the (silicon-containing processing gas plus phosphorous-containing processing gas):(oxidizing processing gas) and maintaining the temperature of the substrate below about 500°C throughout deposition of the conformal layer;" and "wherein depositing a second portion of the film comprises maintaining the ratio of the (silicon-containing processing gas plus phosphorous-containing processing gas):(oxidizing processing gas) substantially constant throughout deposition of the bulk layer and maintaining the temperature of the substrate below about 500°C throughout deposition of the bulk layer." These limitations are not taught by Xia, the sole reference cited against claim 1.

With respect to the elements quoted above relating to varying ratios, the locations cited by the office action do not mention varying a ratio that includes a phosphorous-containing gas. Xia merely mentions varying a ratio of TEOS:oxone. Further, Xia does not mention maintaining constant a ratio that includes a phosphorous-containing gas. Hence, Xia fails to anticipate claim 1. Claims 5 and 19 include a similar element and are believed to be allowable for at least similar reasons.

Moreover, the Applicant's are unable to find anywhere that Xia teaches maintaining a substrate's temperature "below about 500°C throughout deposition of the conformal layer," or "below about 500°C throughout deposition of the bulk layer." The Applicants request that the Examiner specifically point out this element in Xia's teaching. Because the Applicants believe these elements to be absent from Xia's teaching, the Applicants believe claim 1 to be allowable for this additional reason. Claim 5 includes a similar element and is believed to be allowable, at least for similar reasons.

Claim 8 includes the element, "maintaining the substrate at or below a reflow temperature of the silicon oxide layer throughout processing of the semiconductor substrate." As stated above, Xia does not mention anything about maintaining a substrate's temperature below a threshold, whether that threshold is specifically about 500°C or whether that threshold is a reflow temperature of a silicon oxide layer. Hence, Xia also fails to anticipate claim 8.

The remaining claims depend from one of the claims discussed above and are believed to be allowable, at least for the aforementioned reasons.

CONCLUSION

In view of the foregoing, the Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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Attachments
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